

Notice of Allowability

Application No.

10/763,758

Examiner

Thoi V. Duong

Applicant(s)

LEE ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed March 26, 2007.
2. ☒ The allowed claim(s) ~~is~~/are 1, 4, 8, 10, 13, 14, 16 and 20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/244,492.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. This office action is in response to the Amendment filed March 26, 2007.

Accordingly, claims 8, 14, 16 and 20 were amended, and claims 2, 3, 5-7 9, 11, 12, 15 and 17-17 were cancelled. Currently, claims 1, 4, 8, 10, 13, 14, 16 and 20 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the claims:

Claim 14: in line 28, after "second", delete "angels" and insert "--angles--".

Allowable Subject Matter

3. Claims 1, 4, 8, 10, 13, 14, 16 and 20 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claims 1, 10 and 16, none of the prior art of record discloses, in combination with other limitations as claimed, a light guide plate (as well as a method for displaying images in an LCD device) comprising the first light reflecting planes of the light reflecting sections respectively having first angles with respect to the light transmitting surface, and the second light reflecting planes of the light reflecting sections

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respectively having second angles with respect to the light transmitting surface, the first angles having a substantially identical value and the second angles being gradually decreased by a selected amount such that the second angle of a second light reflecting plane is smaller as the second light reflecting plane is remoter from the light incident portion.

The most relevant reference, US 6,323,919 B1 to Yang et al. (Yang), fails to disclose or suggest the first angles having a substantially identical value. As shown in Fig. 2, Yang discloses a light guide plate 12 comprising the first light reflecting planes 15 of the light reflecting sections having first angles "gamma" with respect to the light transmitting surface 13 and the second light reflecting planes 14 of the light reflecting sections having second angles "alpha" with respect to the light transmitting surface 13, wherein the second angles are gradually decreased by a selected amount such that the second angle of a second light reflecting plane is smaller as the second light reflecting plane is remoter from the light incident portion (or the light source) (col. 4, lines 64-67). However, the first angles also gradually decrease as remoter from the light source (col. 5, lines 16-20).

Re claims 8, 14 and 20, none of the prior art of record discloses, in combination with other limitations as claimed, a light guide plate (as well as a method for displaying images in an LCD device) comprising: a plurality of light reflecting protrusions, each of the light reflecting protrusions comprising:

a first light reflecting plane that is inclined with respect to the light transmitting surface to face toward the light source; and

a second light reflecting plane that is inclined with respect to the light transmitting surface and connected with a first edge of the first light reflecting plane and a second edge of an adjacent first light reflecting plane so that the light reflecting protrusions each form a prism shape, the light reflecting protrusions respectively having the second light reflecting planes that are configured to have different areal sizes to control reflectivity of the respective light reflecting protrusions,

wherein areal sizes of the light reflecting protrusions are gradually increased by a selected amount such that the areal sizes of the first light reflecting plane and the areal size of the second light reflecting plane are larger as the light reflecting protrusion is remoter from the light incident portion, and

wherein the first light reflecting planes of the light reflecting protrusions respectively have first angles with respect to the light transmitting surface, the second light reflecting planes of the light reflecting protrusions respectively have second angles with respect to the light transmitting surface, and the light reflecting protrusions each have different heights, wherein the first angles have a substantially identical value, the second angles have a substantially identical value, and the heights from the light transmitting surface to a tip of the light reflecting protrusions are gradually increased by a selected amount such that the height of a light reflecting protrusion is larger as the light reflecting protrusion is remoter from the light incident portion.

The most relevant references, US 6,636,283 B2 to Sasagawa et al. (Sasagawa) and US 6,685,343 B2 to Mabuchi, fail to disclose or suggest the claimed invention.

As shown in Figs. 3 and 10, Sasagawa discloses every limitations of the claimed invention (col. 14, lines 20-25 and col. 16, lines 15-25) except for the second light reflecting plane connected with a first edge of the first light reflecting plane and a second edge of an adjacent first light reflecting plane. In fact, the second light reflecting plane 22 is connected with a first edge of the first light reflecting plane 21 and a first edge of the flat portion 23, wherein a second edge of the flat portion 23 is connected to the adjacent first light reflecting plane 21.

Meanwhile, as shown in Fig. 2, Mabuchi discloses that the first angles "alpha" of the first light reflecting surface 22 have substantially identical value and the second angles "beta" of the second light reflecting surface 20 have substantially identical value; however, Mabuchi fails to suggest that the areal sizes of the second reflecting surfaces 20 are larger and the heights from the light transmitting surface 14c to a tip of the light reflecting protrusions 18 are gradually increased as the light reflecting protrusion 18 is remoter from the light incident portion (col. 5, lines 5-30). In addition, Fig. 10 of Mabuchi also fails to suggest that the first and second angles of the first light reflecting surface 22 and the second light reflecting surface 20 with respect to the light transmitting surface 14c respectively are constant since the vertical angle "alpha" of each light reflecting protrusion 18 is changed (col. 6, lines 53-60).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30

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pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi V. Duong

A handwritten signature in cursive script, appearing to read 'Thoi V. Duong', written in black ink.

05/31/2007